



## "RACE WITH RESTRAINT"

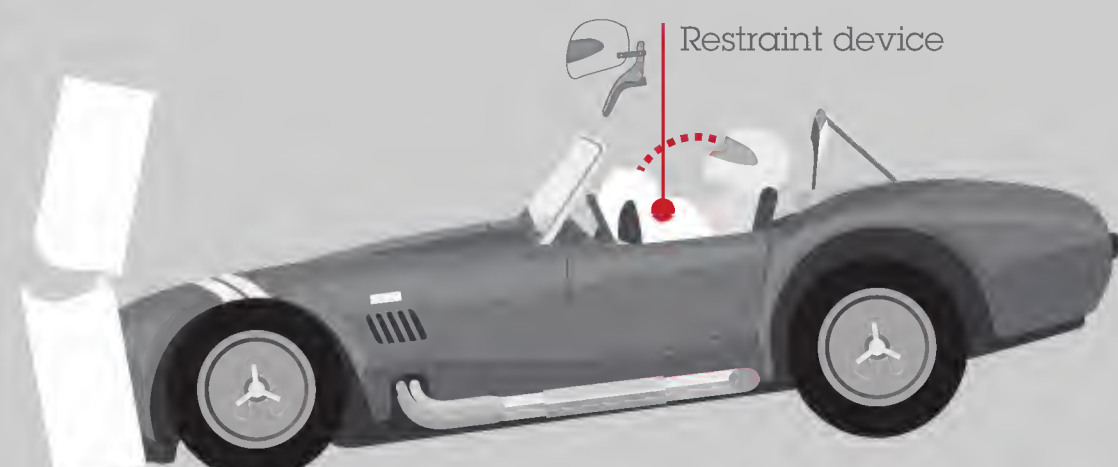
How head and neck restraint systems save lives

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### WHY WEAR ONE?

Head and neck restraints reduce the likelihood of fatal injuries in the event of a crash by limiting the forward movement of the head during a collision. This helps prevent basilar skull fractures - a break in the bones at the base of the skull resulting in severe brain trauma.



### WHAT IT LOOKS LIKE?

The devices rest on the shoulder and attach to helmets using fabric tethers that clip to permanent anchors in the helmet. The device can be held in place with a seat belt harness or body harness depending on the model.



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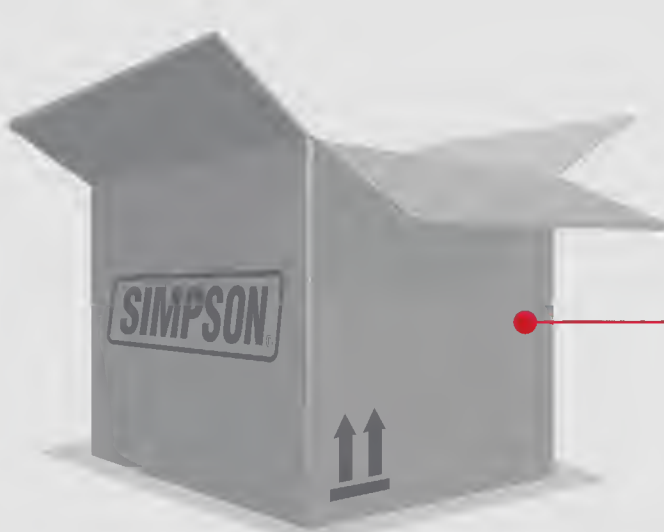


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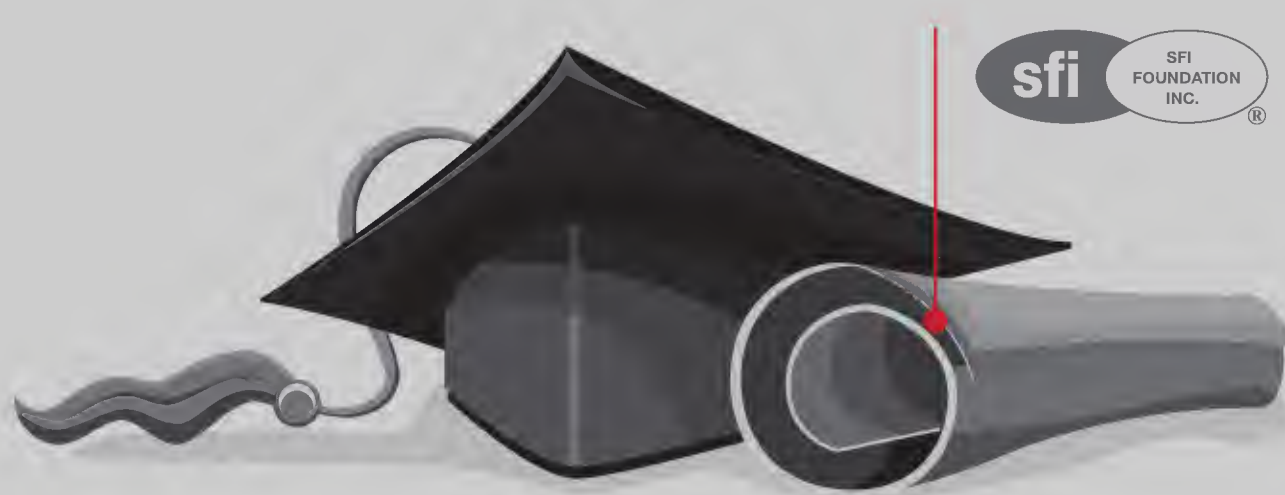
### MANUFACTURERS

Currently there are 4 brands of Head and Neck Restraints which are manufactured by 3 separate companies:



### HOMOLOGATION

All certified Head and Neck Restraints intended for auto racing in the USA must pass testing performed by the SFI Foundation for the SFI 38.1 homologation.



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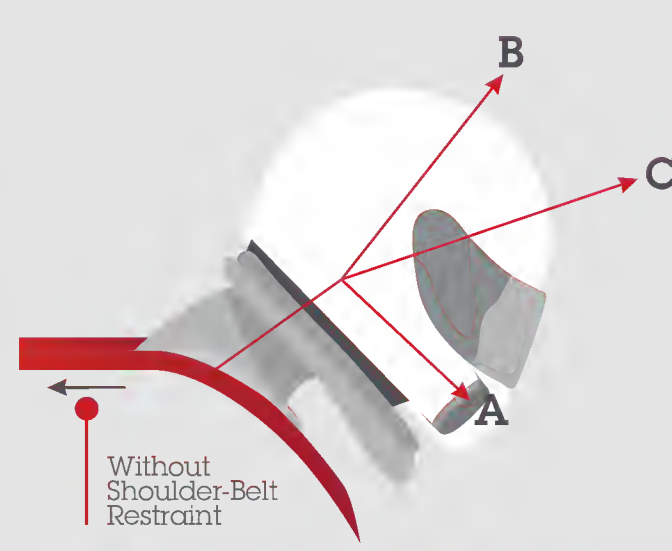
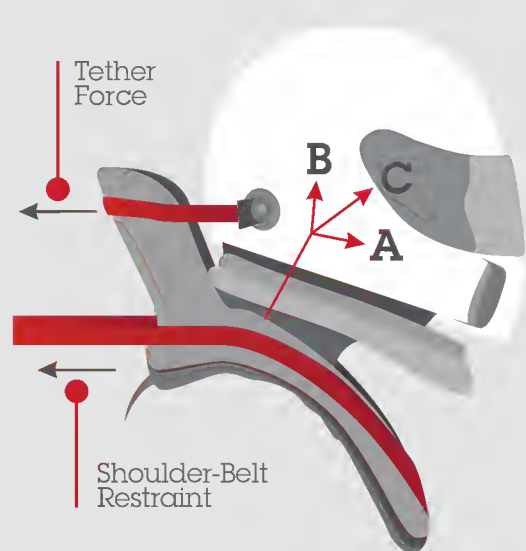


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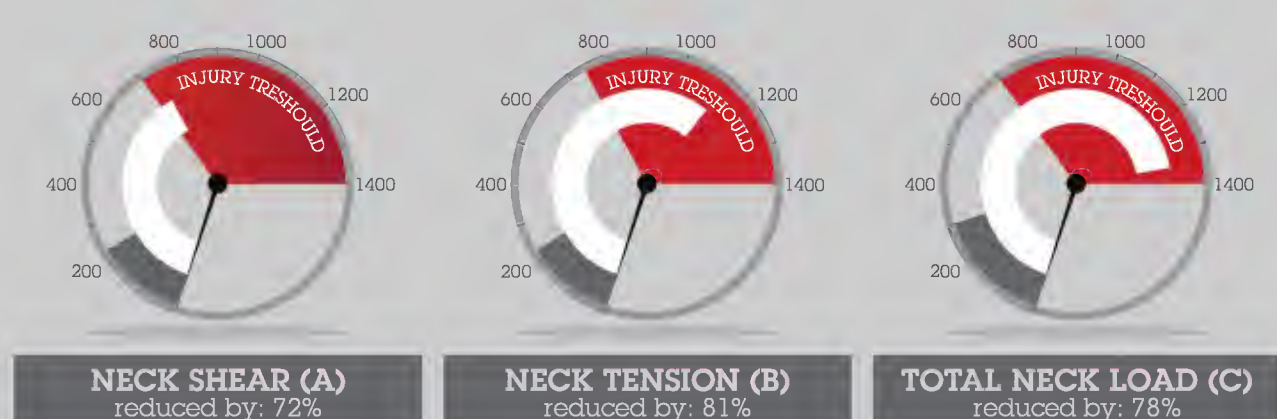
### HOW IT WORKS

When g-loads build during impact, the head moves with the torso so vulnerable neck and skull bones aren't overloaded.



### STATISTICS

A 15 pound head lunges forward at around 100g during a 40g head-on collision. Resulting "shear" (two opposing forces perpendicular to the neck's axis) and "tension" (pulling force along the neck axis) loads vastly exceed the injury threshold, making death more likely.



■ With HANS ■ Without HANS

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### RE-CERTIFIED

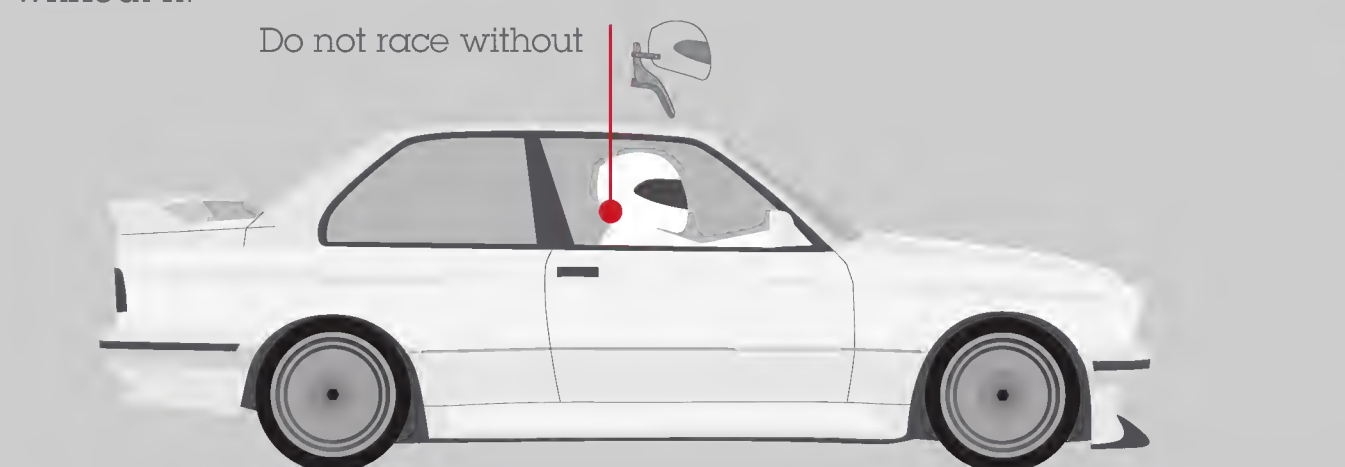
Head and Neck Restraints must be re-certified every five years to receive the SFI Foundation's conformance sticker.



### CONCLUSION

Although many sanctioning bodies have adopted the mandatory use of head and neck restraints during competitive racing, most race tracks independently allow drivers to race without a restraint. Never race without restraint! Even small accidents can become fatal without it.

Do not race without



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